



# **USER MANUAL**

# REMOTE MONITORING & REMOTE MANAGEMENT

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# 12. REMOTE MONITORING & REMOTE MANAGEMENT

# 12.1. INTRODUCTION

In fundamental terms, the "TelesWin" system has been designed for the remote monitoring and remote management of refrigeration and air-conditioning installations. Further improvements have made this system suitable for application in other fields, including the monitoring and management of buildings, residences, etc.

At present, we can offer a wide range of devices which are directly compatible with this system. Specifically, these include modules for the management of cooling units, central units for compressors, condensers and hygrometry, and units for the management of the heating, ventilation and lighting of buildings (NEWEL2 and NEWEL3).

The object of this document is to initiate the user in the fundamental operations of the "TelesWin" system, together with the functions of the DC58 central unit. Functions which are specific to the previous range of central units are identified by the abbreviation <u>AUC</u>, which means "previous central unit".

TelesWin software runs on Windows. The present document assumes that the reader has a good knowledge of this operating system and, accordingly, operations which are considered as standard are not described.

It is assumed that the reader is equipped with a complete system, and will undertake the exercises suggested on their own computer.

IMPORTANT: The attached license agreement for TelesWin software should be read carefully before any use of software or the present documentation. If you do not agree to the terms of this license, you will be required to return the complete software to your dealer within 24 hours.

Please complete the registration form and return by mail or fax to the following address:

Digitel SA Route de Montheron 12 CH-1053 Cugy Fax : ++41 21 731 07 61

We cannot provide any technical assistance to clients who do not return this form. Likewise, any such clients will not be entitled to acquire future updates.

# 12.2. REQUIRED HARDWARE

In the monitoring terminal (e.g. in a refrigeration engineer's office), the "TelesWin" system will require the following hardware:

	MINIMUM	RECOMMENDED			
Operating system (32 or	Windows 95, 98, NT – single-terminal operation, 2000,				
64 bit)	XP, Vist	ta and 7			
Hard drive capacity	100 MB	500 MB			
CD reader	8x	16x			
RAM	256 MB	1 GB			
Keyboard & mouse	YE	ES			
Serial port	YES for connect	ion via a modem			
USB port	YES for DONG	GLE connection			
LAN port	YES for direct connection or connection via the Internet				
VGA colour monitor	YES				
Monitor resolution	800x600	1024x768			

# 12.2.1. IMPORTANT COMMENTS

 $\checkmark$  The Windows operating system must be configured for the maximum number of colours available on the PC used.

- $\checkmark$  The date and time on the PC clock must be set correctly.
- ✓ Files and directories used by TelesWin must not be modified, moved or deleted, whether manually or by the use of other programs. By default, these files will be stored in the directory c:\TelesWin.
- It is recommended that records, alarm messages etc. which are no longer relevant should be deleted.
   Large files will slow down the running of the program.
- ✓ For the restarting of TelesWin following an interruption in the power supply, it is preferable that TelesWin should be installed and started up in a session without the use of a password, by deactivating the function "request Ctrl+Alt+Del upon start-up of PC" in the "configuration panel\user accounts\management of user accounts\advanced options", unchecking "users must press Ctrl+Alt+Del to open a session".
- ✓ For the automatic start-up of TelesWin upon restarting, simply apply the following procedure:
  - Click on the Windows start button
  - Go to the list of programs
  - Double click on start-up
  - A window will open simply enter a TelesWin shortcut using cut and paste or drag and drop.

# 12.2.2. EXTERNAL MODEM

- ✓ Hayes compatible
- ✓ Minimum speed 56,600 bauds

# 12.3. CONNEXION WITH DC58



#### Figure 12.3.1

The fastest and most reliable connection will be a direct LAN or Internet connection. This will permit communication at very high speeds, with the substantial saving of time. For this reason, we strongly recommend this type of connection.

It is possible to connect the modem to the computer using a RS232 cable on the serial port, for communications via a telephone line. However, this form of communication will be significantly slower.

Option 3 will be valid for modems supplied by our company.

Other types of modem may be used, e.g. internal modems. In this case, however, issues involving the compatibility of protocols and conflicts with other modules on the computer may arise and, in many cases, the intervention of specialized personnel will be required for the resolution of these issues.

We cannot guarantee the correct operation of the remote monitoring function or the compatibility of future versions of programs with modems which are not supplied by Digitel.

# 12.4. INSTALLATION OF THE TELESWIN PROGRAM

It is strongly advised that all other programs running on the PC should be closed before starting the installation process. This will apply specifically to resident programs, such as anti-virus software, the screen saver, etc. These programs may interfere with the correct installation of TelesWin software. The anti-virus test on the installation medium may be completed before installation.

To install the software, insert the CD into the reader and start the program "setupTelesWin" which is contained on this disk. Follow the customary installation procedure for Windows programs.

The installation program will create the directory "TelesWin" and will copy all the necessary files into this directory.

If, in the course of installation, the installation program asks the question "replace existing files?", click on the button "yes, replace all".

In certain configurations, you may encounter difficulties during the installation of the program. The installation program may display error messages. If this type of problem arises, you should proceed as follows:

- 1. Close all programs running on the PC. Disable the start-up of all resident programs (e.g. anti-virus software, screen saver, etc.). Restart the PC. Check that the programs disabled previously have not restarted. Restart installation.
- 2. If problems persist, check that there is at least 100 MB of free capacity on your hard drive. Run the program "Scandisk" for the target disk, and restart installation.

# 12.5. UPDATES OF PREVIOUS VERSIONS OF THE PROGRAM

It is recommended that a back-up copy of the TelesWin working directory (by default c:\TelesWin) should be created before executing any update. If this is not done, data may be lost if an interruption in the power supply or a system failure occurs during this operation. This back-up copy will also allow the user to revert to the previous version, should the new version prove to be incompatible with your system.

To execute an update, follow the same procedure described for the initial installation of software.

# 12.6. STARTING THE PROGRAM

To ensure the normal operation of the software, the DONGLE-type electronic key must be connected to a USB port.

Any attempt to read or use this key, other than for its normal use with the TelesWin system, may result in the destruction of the key. This type of destruction is not covered by the terms of the guarantee.

In accordance with standard procedure for Windows, the program is started by double-clicking on the TelesWin icon in the directory of the same name, or by selecting the program in the "Start" menu.

Upon initial start-up, or following a change of configuration (change of communication port, transition from modem connection to direct connection with the DC58, etc.), the software configuration window will open automatically when the program starts up.

Upon initial start-up, the program will run in German. To change to another language, select English from the ["Sprache"] menu and click on "OK" to validate your selection.

TelesWin Konfig	guration			
Allgemein	Kommunikation	Anrufe	Alarme	Personnalisierung
Sprache D	eutsch 🔻			
Paramet	erdifferenz zwische	en PC und Modulen a	am Ort signalisiere	'n
Ordner zu Ar	chivierung der Speicł	nerdaten		
Automatisch	es Löschen der Spei	cherdaten vom PC	nach Tagen	0
	Į	Лок 🔰		.:

Figure 12.6.1

The window which opens will allow the programming of the basic software configuration.

Configuration of	TelesWin				x
General	Communication	Calls	Alarms	Personalizatio	ons
Language Eng Colored st Show the c birectory of re elay of autor	lish  ate indication on gener differences between th ecordings natic erasing of record	ral view (DI58 only) e parameters on the d	isk and in the modules	(LN48, DI48) 0	If this value is "0", records will not be deleted. The recommended value is 365.
nis parameter is ex apter 12.10 "Gene	plained in ral views"				
		С			.:
				Figure 12	2.6.2

#### The "Communication" tab will open window 12.6.3.

Config	uration of Teles	Dhana much	an to allot for			
	General Communication Calls Alarms				Phone numbe	er to dial for external line
	Communication int TCP only	terface	Computer is connect	ted as	This will be a start of each for installation	dded to the call number ns.
			remote PC			
	Number to dial	to get the outsid	e line			
Select "TCP" for		Тур	e of the modem Digite	STD001		
connection via the						
Internet. For						
connection using a						
modem, select the						
"COM" port used.						
			<b>Елок</b> 🔰			
						Figure 12.6.3

TelesWin will automatically interrupt communication with the installation concerned if no operation has been executed within a programmable time interval. There may be differentiation in this time interval, according to the time of day. During office opening hours, this time interval will generally be programmed for a longer duration, in order to allow the operator sufficient time to observe and acknowledge anomalies, modify parameters, etc... Outside operating hours, when the operator is not present, there is no purpose in maintaining communication beyond the time required for the logging of data on the status of the installation and alarms.

Parameters in the "Calls" tab will be used for the programming of the time schedule and times for the interruption of communication, during daytime and night time operation.

Important: If a single PC is monitoring a number of installations simultaneously, it is recommended that the automatic communication interruption time should be set as short as possible, in order to allow the proper indication of alarms on all the installations concerned.

Configuration of T	<b>FelesWin</b>			
General	Communication	Calls	Alarms	Personalizations
Delay of automa during office op out of office op <u>N</u> umber that will be	atic interruption of the pening hours (minutes) pening hours (minutes) e programmed as secon	e communication 100.0 100.0 nd phone number		
				Figure 12.6.4

"Alarms" tab	Working hours may			
Configuration of TelesWin	be programmed here			n
General     Communic       Working hours     Start time (HH:MM)       Image: Start time (HH:MM)     Image: Start time (HH:MM)       Image: Start time (HH:MM) <t< td=""><td>End time (HH:MM) Wednesday ▼ Friday Thursday ▼ Saturday</td><td>Alarms</td><td>Personalizations</td><td>Here you may select which alarms are to be signalled during working hours and hours of closure respectively. If an alarm is triggered outside working hours</td></t<>	End time (HH:MM) Wednesday ▼ Friday Thursday ▼ Saturday	Alarms	Personalizations	Here you may select which alarms are to be signalled during working hours and hours of closure respectively. If an alarm is triggered outside working hours
✓ low ✓ middle Automatic printing of automatic erasis ■ Handle a text file core	high     low     f alarms at the receiving ng of alarms (days) ntaining the alarms in progress	v middle v	f high	with a lower priority than that required for notification during hours of closure, the alarm concerned will be signalled in the first
Figure 12.6.5			Alarms deleter Where alarms year w disk. C deleter	s will be automatically d after this time interval. this value is set to "0", d ating back up to one till be stored on the hard older alarms will be d.

The "Personalization" tab provides the option for the addition of client logos or other images to the saver screen and printed reports. Images must be stored on the hard drive in one of the formats which can be accommodated by TelesWin (RLE, BMP, PCX, GIF, TIFF, JPEG, WMF, ICO, ICW).

Configuration of T	TelesWin			
General	Communication	Calls	Alarms	Personalizations
Logo to be display standby screen printed reports	/ed on	СТок С		Search directories to select files containing the image concerned
				Figure 12.6.6

In normal operation, the PC screen will appear as follows:



In this condition, the computer is ready to receive incoming calls from installations.

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# 12.7. COMMISSIONING OF A NEW INSTALLATION VIA A LAN PORT

Firstly, it will be necessary to connect the DC58 to the PC using a "RJ45" crossover Ethernet cable. To complete a connection, the LAN parameters of the PC must be configured within the same network domain.

In a new DC58, the factory-set LAN parameters will be as follows:

IP	address:	192.168.254.254

Netmask: 255.255.255.0

Gateway: 192.168.254.255

If the PC is to be included in the same network domain, the first three digits of the IP address must be the same. To access the network parameters, go to network connection properties. Then go to Internet protocol properties (TCP/IP). The window shown below should then open. Before making any changes, record the initial parameters – these will need to be restored later. Complete the following fields as shown in the example (the value "83" has been selected at random – you may enter a value other than 254).

Internet Protocol Version 4 (TCP/IPv4)	Properties	
General		
You can get IP settings assigned auto this capability. Otherwise, you need t for the appropriate IP settings.	matically if your network supports o ask your network administrator	
Obtain an IP address automatica	illy	
• Use the following IP address:		
IP address:	192 . 168 . 254 . 83	
Subnet mask:	255.255.255.0	
Default gateway:		
Obtain DNS server address auto	matically	
Use the following DNS server add	dresses:	
Preferred DNS server:		
Alternate DNS server:	· · ·	
	Advanced	
	OK Cancel	Figure 12.7.1

# 12.7.1. CONFIGURATION OF ROUTER

In order to ensure permanent access to your central unit, it will be necessary to configure the redirection of your router ports as shown below:

Protocol	Ports	Address	Ports
TCP	2000 ÷ 2003	to 192.168.254.254	2000 ÷ 2003
FTP	21	to 192.168.254.254	21
Telnet	23	to 192.168.254.254	23
ТСР	987	to 192.168.254.254	987

The address indicated has been selected at random. Obviously, the relevant reference will be the address assigned to your DC58 by your network administrator.

Once the changes have been made, click on "OK" to confirm. Connect the DC58 to supply and wait 2 minutes for the completion of initialization. Start the TelesWin program, open the "Communication" tab, select the "TCP" communication port and click on "OK" to confirm.

Configuration of T	elesWin			
General	Communication	Calls	Alarms	Personalizations
Communicatio	on interface	Computer is connec	ted as	
TCP only	•	local PC		
		remote PC		
Number to	o dial to get the outsid	de line		
	Туг	pe of the modem Digite	a STD001	
		🔊 🕺		
				5

To call up the DC58, go to "Installations"/ "Call up an installation".

Digitel	- TelesWin			Color Inc.				
<u>G</u> eneral	<u>Installations</u>	Recordings	<u>R</u> eports	<u>B</u> roadcast				
	C <u>a</u> ll an instal	lation				ſ	Selection of installation	
	<u>M</u> odify an ex	kisting installatio	on				Select the installation or on number	enter its phone
			Figure	12.7.3				
			Once th enter th the DC	is window e original l 58 and clic	is open, P address c k on "OK"	of	Phone number, IP or DNS 192.168.254.254	
								Figure 12.7.4

### Complete the identification fields as follows;

Password 🛛 🖻 💌	
User 1	User: 1
Password •	Password : 1
Cancel OK	Then click on "OK"
Figure 12.7.5	

Parameters of central unit DI58	- 0 X
General Time Access Control SAS messaging E-Mail messaging LAN parameters Refrigeration circuits Info	
You are going to setup a new installation. Enter the name of the installation.	
Name of installation	
☐ Generate high priority alarm in case of defect of the second compressor or fan	
Currency €	
Advanced parameters Energy management Cancel OK	
Fig	ure 12.7.6

The next window will ask you to name your installation. For the purposes of this example, the installation is to be called "Test\_Digitel". Once you have entered a name, confirm your choice. After confirmation, it will be necessary to wait a few minutes for the central unit to become operational.

When you first connect, it is possible that the installation will not display the "central unit". To make the latter appear, exit and reconnect or right click in the centre of the window to go to "Configuration, Refresh Configuration".

This will open the following window:



The next stage will involve the modification of network parameters for the DC58, in order to ensure compatibility with the network domain of your installation. To do this, double click on the central unit. In the resulting window, go to the "LAN parameters" tab.

To complete these fields,	Parameters of central unit DI58	
you will need to consult	General         Time         Access Control         SMS messaging         E-Mail messaging         LAN parameters         Refrigeration circuits         Info	
your network administrator,		
who will notify you of the		
be accommodated by your	Local IP Address	
network. You will need to	Subnet mask	
note the addresses entered	Gateway IP	
in order to be able to call up		
the DC58!		
At the same time, set the		
clock using the "Clock" tab,		
to ensure that everything	Advanced parameters Energy management Cancel	ОК
will function correctly.		



If you lose the addresses entered for the DC58, access to the latter will no longer be possible. However, there is a back-up solution. The factory-set LAN parameters of the DC58 can be reprogrammed manually by the application of the following steps:

- Move both switches to the right



Reset the DC58 (by the brief application of light pressure to the black button on the grey base).

- Wait for 1 – 2 minutes and, once the DI58 has restarted, the four LEDs will flash simultaneously. You will then have 4 seconds to move both switch back to the left.



- Once the 4 LEDs are flashing in a continuous sequence, just complete a final reset operation and the factory-set parameters on your DC58 will be restored. You can then return to the start of Chapter 12.7 commissioning of a new installation
- If you cannot manage to complete the switchover within 4 seconds, the previous parameters will be retained. Complete a reset to retry the operation.

Once the addresses of the DC58 have been modified, you will need to reconfirm the IP parameters of the PC. Simply open the TCP/IP Internet protocol properties and reconfirm the parameters entered prior to the modification.

Connect the DC58 to the network of your installation.

Your central unit is now ready for use. You can now call up your installation.

# 12.8. CONNEXION WITH AN INSTALLATION

To call up an installation, click on the "Installations" tab, then on "Call an installation".

Digitel	- TelesWin		-				
<u>G</u> eneral	Installations	Recordings	<u>R</u> eports	<u>B</u> roadcast			
	C <u>a</u> ll an insta	lation				ſ	Selection of installation
	<u>M</u> odify an e	xisting installatio	on				Select the installation or enter its phon number
			Figure	11.8.1			
			Enter the which yo click on "	IP addres u wish to o OK" (this	ss of the DI58 call up, then address has		
			been sel	ected at ra	andom)		Phone number, IP or DNS 192.168.254.254

Figure 12.8.2

## Complete the identification fields as follows;

Password			
User	1	User: 1	
Password	•	Password :	1
Cancel	ОК		
	Figure 12.8.3		

Then click on "OK"



The screen will now show a window with the list of all the constituent units of the installation.

Each of the modules will have an ID written on the side. Upon the commissioning of the installation, it will be necessary to record the IDs for each module, in order to allow their renaming at a later stage. The window will display the list of modules connected to the bus. The central unit will assign default designations to these modules. The ID column will display the ID numbers of modules, which are affixed to their respective housings. Each module may be identified in this list, and its designation may be modified.



To rename a unit, right click on the unit in question, and then click on "Rename" in the scroll-down menu.



Depending upon the operating mode of the module called up, various views of the unit will be available. For example, connection with a cooling unit will open the following window:

The "List of alarms" button will open the window displaying current alarms on the unit concerned.



# 12.9. PERSONALIZATION

The "Personalize the alarms" button in Figure 12.8.7 will open the following window:

Personalization of alarm messages		
Standard message	New message	Priority +
Ambient temperature too low		high 💌 🔺
Ambient temperature too high		high
vaporator temperature too low		high
vaporator temperature too high		high
emperature of probe E too high		high
emperature of probe F too high		high 🗏
mperature of probe E too low		high
emperature of probe F too low		high
ontact C1 alarm		high
ntact C2 alarm		high
ve not responding		high
ault of probe C		high
ault of pressure transmitter		high
fault of probe C		high
fault of pressure transmitter		high
robe C temperature too low		high 🔻
<u>O</u> riginal properties	Слок 💙	(

The standard alarm messages displayed on the left-hand side of the table will be replaced by customized messages, which can be entered in the "New message" column. Where this column is left blank, alarms will be displayed in the form of standard messages. Each alarm should be assigned a given priority in the "Priority" column.

All the customization operations described above will only apply to the unit which you are currently programming.

The "Original properties" button will restore all the default designations for the unit.

# 12.9.1. CUSTOMIZATION OF DISPLAYED VALUES

The "Personalization" button in Figure 12.8.6 can be used for the modification of standard designations for displayed values, probes, input and output contacts. This button will open the window below.

State of unit					
	Test_D	Digite	I - Slave 1/1		To modify the designation of a given
			Clock		variable, click once on the variable
			Time 02:30		
			Date 02.01		whose designation is to be modified.
Mesured values		•			
Humidity (_%)	-25.0	~			
Setpoint	70.0				
Analog output (%)	0	-			Then click on the "Personalization"
Inputs		•	Outputs	•	button in Figure 12.9.2 – the following
Contact C1	1	~	Humidifier	A	window will appear:
Contact C2	_/_		De-humidifier _/_		
Spec. function	none	-	Fan		
			Alarm _/_	+	
Special functions	<b>I</b>			Process	
Test_Digitel - Slave 1/1			>=2224516587		
r			Personalization		Figure 12.9.2

Original description		
Ambient temperature (probe A) °C		
New description		
De oot display this paymenter		
Do not display this parameter		
Display warning 🕽 when	?	
Personalize the menu in use		
Restore deleted settings		
Restore deleted settings		¥

Figure 12.9.3

The first field indicates the designation of the parameter which you are about to modify.

The second field allows you to enter the new designation for the parameters selected.

By checking the box "Do not display this parameter", the parameter concerned will no longer be displayed in the list (to restore this parameter, just click on the "Original properties" button).

Under "Display warning ! when..." you can enter a condition. When the unite is displayed in text mode and this condition is fulfilled a warning sign (!) will be placed

after the displayed value. The condition consists of an operator and a numeric value. The following operators can be used:

- < smaller than</li>
- > greater than
- = equal to
- <= less than or equal to
- >= greater than or equal to
- <> different from

Examples of conditions that can be entered:

=0 ! will be placed after the displayed value when the value is equal to 0

>12.5 ! will be displayed when the displayed value is higher than 12.5.

The numerical value of a digital input/output is 0 when the contact is open and is equal to 1 when the corresponding contact is closed. For example, with the condition =0 entered for the "Contact C1" input, the warning (!) will be displayed when the input contact C1 is open.

The parameter "Special function" can have one of the following values:

- Displayed state Numerical value
- None 0
- Offset 1
- Stop 2
- Forced on 3
- Forced defrost

Thus, with the condition <>0 entered for this parameter, the warning (!) will be displayed when one of the special functions (setpoint offset, stop, forced on or forced defrost) is in progress.

The above explanation can also be displayed by pressing the [?] button.

4

These alert functions are available from TelesWin version 20.11.1 and with firmware versions of the DC58 from 20091 onwards.

The "Personalize the menu in use" button will allow the modification of the tab which includes the parameter concerned, in this case the "Config." tab. The tab can also be concealed by checking the "Do not display this

parameter" box (the check symbol will only appear if you click on the "Personalize the menu in use" button).

The "Original characteristics" button will restore the original configuration. This button can also be used to restore the display of parameters concealed using the "Do not display this parameter" function.

After each modification, click on the "OK" button to confirm.

# 12.9.2. CUSTOMIZATION OF THE PARAMETERS

Click on the "Parameters" button in Figure 12.10.1 to go to the list of parameters for the selected unit.

eneral T.Ambient Defrost Probe C P	robes E,F	Settings	Calendar	Infos		_	Ambient temperature alarm low
Descriptio	n				Value	•	And create temperature darman
unction mode of slave				ref	rigeration unit contr	~	
lectronic valve?				No			
etpoint (°C)				0.0			
elta (°K) (regulation between setpoint ar	nd setpoint+	delta)		2.0			
etpoint limitation - minimum (°C)				-90	.0		
etpoint limitation - maximum (°C)				90.	D		
alve delay after the defrosting (Min)				2.0			
etting of alarm limits of ambiant tempera	ture			abs	olut limits		
mbient temperature alarm low limit (°C)				-5.0	)		
mbient temperature alarm high limit (°C)				3.0			
elay of ambient temperature alarm (Min)				30.	0		
emperature setpoint offset (°K)				0.0			
emperature setpoint offset during load-s	hedding (°K	)		-0.1			
ower of evaporator (kW)				2.2			X
linimal ON-time (min)				0.0			
linimal OFF-time (min)				0.0			
unction of analog output				pro	portional to amb. temp.		
emperatue corresponding to OV analog o	utput (°C)			-23	.0		
emperatue corresponding to 10V analog	output (°C)			-15	.0	Ψ.	
_							
Advanced parameters	Personal	ise	P	ersona	lise the alarms		
Copy parameters from an o	ther unit						
L							

To customize the designation of a parameter, select the line of the parameter to be renamed, and then click on "Personalize".

The window shown in Figure 12.9.3 will open and process in the same way as changing a displayed value.

Figure 12.9.4

# 12.10.GENERAL VIEWS

General views will display all the units, or a group of units, in a given installation, on the same screen. To create a general view, go to the "Installation" menu, then to "modify an existing installation. This will open the following window:

rd of the installati	on				
Installation	Test_Digitel	•	<b>Мок</b> (Д. С.		
Phone, IP or DNS	192.68.2.77			Messages	
Owner				E-Mails	Click here to
Advanced	Configuratio	n of display LN31	Periodic tasks	SMS	create a general view.
Name of the	unit Type	ID	Function mode	ID	
Central unit	DI58	0	refrigeration unit controler		
Slave 1/0	DI24-4	2224516580	universal- and humidity con		
Slave 1/1	DI24-4	2224516587	universal- and humidity con		
Slave 1/2	DI24-4	2224516599	refrigeration unit controler		
				<b>\</b>	
4	m			T	Figure 12.10.1

By clicking on the "Automatic generation of a new view", it is possible to create a simplified view of all units in the installation, with the exception of regulators in surveillance mode. Each unit is represented by an indicator which will display the ambient temperature, pressure or hygrometry, according to the mode of operation concerned. The default designation of this new view, which will be "Auto 1-1", will be displayed in the table shown in the window.

It will also be possible to create your own views, which are better adapted to your requirements. To do this, click on "New view".

	Test_Digitel		
Name of view	Backgroud image	•	
p1-1			<u>C</u> omponents of the view
			<u>N</u> ew view
			<u>M</u> odify view
			Delete view
			Close

In the new window, enter the name to be applied to this view. Click on the "Select background image" button. This will open the file selection window. From this window, you can select an image which will be displayed as the background image to your new view. This image should be drafted beforehand using a drawing software, and saved on your hard drive in one of the formats which is recognized by TelesWin. The image concerned may be a digital photograph or an image which has been digitized using a scanner. TelesWin will accommodate the following formats: RLE, BMP, PCX, GIF, TIFF, JPEG, WMF, ICO, ICW. In principle, this image should comprise a schematic representation of the installation concerned. It is recommended that the image should be stored in a directory close to the "C:\" drive, in order to avoid an excessively long access link.

Data of view	e x
	Test_Digitel
	СЛок
Name of the view Test	
Backgroud image	
Image C:\teleswin\test.JPG	
Width 1'344 <u>H</u>	eight 818
Automatic generation o	f a new view



In the "Width" and "Height" fields, the size of the view can be modified. By default, this view will adapt to the size of your monitor. Click on "OK".

	Test_Digitel		"Com
Name of view	Backgroud image	•	be di
Test	C:\teleswin\test.JPG	×.	Components of the view imag
			<u>N</u> ew view
			Modify view
			Delete view
			Close
		4	

The new view will appear on the list. Select this view and click on "Components of the view". The view will be displayed on screen with the selected image.



Figure 12.10.5



Firstly, select the unit, from the "Unit to be displayed" list, which the new component is to represent.

Then select the parameter which will be displayed for this unit, from the "Parameter to be displayed" list.

Now select the type of component from one of the indicators or selection zones shown. The selection zone will form a rectangle on the monitor, but will not be visible during subsequent operations. However, a mouse click on this rectangle will call up the unit represented by the zone concerned. Accordingly, where the selection zone is positioned on the illustration of a refrigeration cabinet, the user will be able to call up the module which manages this unit by clicking on the image.

It is also possible to create a zoom selection for the opening of a different view. This is particularly useful for large-scale installations. For example, you may have a general view of a store, with detailed views created for different parts of the store. By positioning these zoom selections on your general view, clicking on a given point in this view will open the detailed view of the location concerned. It will also be possible to position a zoom selection in a detailed view in order to return to the general view. These zoom selections will also be invisible.

The component designation will be initialized by TelesWin using the name of the unit concerned. This can be changed. The "Background colour" button will allow you to select the base colour for the indicator concerned. A palette of 48 colours will be available for this purpose, to which customized colours may be added. The most recent colour used will be applied by default to the following indicators. However, the Background colours which you select will only be displayed if the option for "Indication of the status of units on synoptics" is unchecked (see Chapter **12.6 starting the program**), otherwise colours will be consistent with the status of the regulator concerned. For example, this component will be shown in sky blue if refrigeration is in progress, or in orange if the unit is in defrost mode.

Click on "OK" to validate the configuration of the component shown in the view.

The component selected will be displayed in the top left-hand corner. Its size can be changed by moving the cursor onto the size-change buttons, which can be moved with the left mouse button held down. To move the component, position the mouse cursor on the component concerned, hold down the left mouse button and drag the component to the desired position with mouse button held down. In this way, the component can be moved to the position where the corresponding unit is represented.



Figure 12.10.7

However, for greater accuracy, it is recommended to proceed as follows:



To resize the frame using the upper segment only, apply the following combination:

"Shift + up/down arrow"

"Ctrl + left/right arrow"

To resize the frame using the right-hand segment only, apply the following combination:



To resize the frame using the lower segment only, apply the following combination:

"Ctrl + up/down arrow"



To resize the frame using the left-hand segment only, apply the following combination:

"Shift + left/right arrow"

Figure 12.10.8

The size and position of the component can also be accurately parameterized in the configuration window for the view of the component concerned (see Figure 12.10.6).

Right clicking on the mouse will open the following scroll-down menu:



Where this option is activated, it will be easier to align components using the mouse (Short cut: "G" key.

Where this option is checked, the ratio between the height and length of the component will remain proportional. Where this option is unchecked, the component may be assigned any shape desired.

Repeat the same procedure for all the components which you wish to be included in the view screen. For example, this might result in the following window:



Figure 12.10.10

This screenshot represents the view of an installation. We have included a number of indicators and an invisible selection zone which can be used to call up the module which manages the central unit concerned.

Clicking on the indicators will call up the corresponding unit, and will display full details of its operation.

The call-up of units by clicking on components will not function at this stage. These functions will be operational on the views displayed in the course of communication with the installation.

There may be as many as 10 different views of a single installation.

# 12.11.BASIC FUNCTIONS

This chapter describes the basic functions and processes which can be executed on TelesWin. Firstly, we will describe all the processes which can be completed from the main "Installation configuration" window, which will open when the installation is called up.

In the configuration window, you may right click on one of the units. This will open a scroll-down menu which includes the following process options:

Config	uration of the installation	1							<u> </u>
			Test_Digitel						
	Name of unit	Mesur	ed Setpoint Alarm	Outputs	Infos	ID	Туре	•	
2	Central unit					0	D158	0 ^	
- **	Refrigeration							0	
	Slave 1/0	3	Call the unit			22245 28509		0	
0	Slave 1/1	1	Call the unit			22245 29245	DC24D	0	
Y	ITVAC	1	Supplementary	Info	· · ·			0	
i k	Miscellaneous							0	
		1	Recordings		Ctrl+E				
		-	Drint HACCD re	port					
			THICHACCITE	pore	- 1				<b>e 1</b>
		2	Print HACCP of	period	L				
			Historic of alarn	าร					
		6	Historic of inter	ventions					
		0	Thistoric of inter	VEHUOIIS					
			Historic of unit						
		1	Rename		Ctrl+R				
		•	Movo						<b>*</b>
		3	MOVE						
			Manitaring off						Historic of
			Monitoring of						alarms
			Text display on	ly	Ctrl+T			-	
		1						>	
			Configurations		· · ·				
		Â	Maintenance		L				
		Y	Export						
			Export		•		40.44		
			Get resets		Ctrl+I	Fig	ure 12.11	.1	

# 12.11.1. CALL THE UNIT

Call the unit

Figure 12.11.2

Clicking on "Call the unit" will open a detailed window showing all the parameters for the unit in question. This process may also be completed by double clicking on the unit concerned, or by selecting the latter (with a single click) then clicking on the "Call the unit" button on the right-hand side of the window.

12.11.2. SUPPLEMENTARY INFO



# 12.11.3. SUPPLEMENTARY INFO / SETTINGS

By clicking on "Settings", TelesWin will connect to the unit concerned, and the following window will open:

By following the detailed procedure described in the green box, this window will allow the display of an additional parameter in the "Info" column of the "Installation configuration" window.

General T.Ambient Defrost Probe C Probes E,F Settings Calend	lar Infos		
Description	Value	<ul> <li>1. Selection</li> <li>has to b</li> </ul>	ct the parameter whose value be displayed in the column
unction mode of slave	refrigeration unit contr	"Info"	a 1111 a 70
lectronic valve?	No	Z. UICK	on the right button of the
etpoint (°C)	0.0	3. Selec	t the option "Display in the
Delta (°K) (regulation between setpoint and setpoint+delta)	2.0	column	Info"
etpoint limitation - minimum (°C)	-90.0		
etpoint limitation - maximum (°C)	90.0		
alve delay after the defrosting (Min)	2.0		
etting of alarm limits of ambiant temperature	absolut limits		
mbient temperature alarm low limit (°C)	-5.0		
mbient temperature alarm high limit (°C)	3.0		
Delay of ambient temperature alarm (Min)	30.0		
emperature setpoint offset (°K)	0.0		
emperature setpoint offset during load-shedding (°K)	-0.1		
ower of evaporator (kW)	2.2		
Ainimal ON-time (min)	0.0		
Ainimal OFF-time (min)	0.0		
unction of analog output	proportional to amb. temp.		
emperatue corresponding to 0V analog output (°C)	-23.0		
emperatue corresponding to 10V analog output (°C)	-15.0	-	
Advanced parameters Personalise	Personalise the alarms		
ave 1/0			

## 12.11.4. SUPPLEMENTARY INFO / WORKING TIME

By clicking on "Working time", TelesWin will display the run time of cooling units, as a percentage, in the "Info" column.



📓 Recordings

Ctrl+E

Figure 12.11.5

To call up the records for a given unit, click on "Recordings" or press "Ctrl + E". The following window will open.



TelesWin will import all records for that day into the PC, and will display them in the form of a chart, which may be analysed using a number of tools.

Firstly, we will consider functions associated with frequency.



The start date and the end date of records will be shown at the bottom of the window. By default, times will be displayed on the graphic. To modify the recording period, two options are available:

- Click on one of the arrows, which will alter the date by one day
- Click on the calendar icon to select the period which you require.

We will now describe the functions associated with variables.



The button marked with a blue chart allows variables to be displayed in the form of a chart.

The printer button will allow variables to be printed in the form of a diagram or table (print functions executed by the printer will be governed by the form of display which you have selected).

By clicking on the zoom button (magnifying glass), instructions for zooming into a given point on the diagram will be explained. Once the process is complete, this function can also be used to reinitialize the default display.

The last button will add or delete limiting values programmed in the configuration of records.

Other functions may be called up by right clicking on the window.



The curves represented will be selected by TelesWin on a default basis. This configuration can be modified – it is possible to add or remove curves for the module concerned, or even for a different module.

Clicking on "Add/Remove" curves will open the following window:



In this window, you may select each parameter for each unit, which will then be shown on the graphic display, for the purposes of comparison or simply for the analysis of variables. Simply check or uncheck as required.

The search tab, right at the top, will assist in the location of a specific unit.

Once you have selected the parameters required, confirm by clicking on "OK".

Figure 12.11.10

If you click on "Default configuration", TelesWin will restore the default display of parameters.

Clicking on "Modify configuration" will open the following window:

It is possible to modify the display of each curve, set limiting values, define the maximum/minimum scale, add parameters to the list or even change the colour of curves.

Scale	kinimum -20	Maximum 30	Click here to modify	y the colours of curves	
Display of the limit o non Will be printed	t values set-points Low t with the command "Print all n	alarm set-points imit 0.00 High lin recordings of an installation"	© custom nit 0.00	Click he paramet	re to add ers.
* Unit	Parameter	Label line 1	Label line 2 Q		
Slave 1/0	Ambient temperature (pro	Slave 1/0	Ambient temperature (probe /		
Slave 1/0	Valve	Slave 1/0	Valve		
				Click here remove paramete	e to rs.

Figure 12.11.11

This function can be used to print out the main parameters for each unit, in accordance with the requirements of the HACCP protocol.



History of interventions \* 11 17/09/2012 10:59 Unité centrale jb Proprietaire-PC/Proprietaire Texte C: Frogens a ongle: Richard Meunier Richard Meunier Digitel SAS Autorisations d'accès --> plusieures modificati 16/09/2012 23:00 Unité centrale 1 JB-ST/Jerzy.Bystranowski Texte PC: JB-3... Dongle: Digitel SA JB --> 0 16/09/2012 22:58 Chambre de con 1 tion Texte JB-ST/Jerzy.Bystranowski PC: Dongle: Digitel SA Table -> plusieures modifications ID 16/09/2012 22:38 Unité centrale 1 JB-ST/Jerzy.Bystranowski Texte pc. Dongle: Digitel SA Table --> plusieures modifications 4//00/2042 22.27 Chamber 4 ок 🛚

Figure 12.11.14

This window will display all the processes which have been executed on all units, the originator of modifications, the PC from which these modifications have been executed and the Dongle used for this purpose.

# 12.11.9. HISTORIC OF UNIT

Historic of unit

Figure 12.11.15

This window will display all the processes which have been executed on the unit selected, the originator of modifications, the PC from which these modifications have been executed and the Dongle used for this purpose.

12.11.10. RENAME

Click here to rename a unit.

🛬 Rename

Ctrl+R

Figure 12.11.16

## 12.11.11. MOVE

This function is used to change the position of a unit in the "configuration of the installation".

Move

Figure 12.11.17

Configurat	ion o	f the ins	tallatio	on					
							Digitel		
Name of un	Mesur	ed Setpoi	nt Alarn	n O	, ID	Туре	State	Function mode +	
🙎 Cer		insert ov	er		0	DI58	0	refrigeration unit co 🔺	
🖃 🗱 Ref		insert he	 nw				0	energy counter	<b>a</b> a ()
	28	place ins	ide		22245'17933	DI24-E5	0	refrigeration unit co	
	49	cancel			22245'15224	DI24-4	0	universal- and humid	
	-1,			_	22245'15746	DI24-4	0	refrigeration unit co	
	-24.	6 -34.0	۲	¢	22245'09970	DI24-4	0	pressure controler	
	0.8	5.0			22245'14822	DI24-4	0	refrigeration unit co	<u> </u>
	-0.1	2.5			22245'14823	DI24-4	0	refrigeration unit co	
	-0.2	2 3.0			22245'14534	DI24-4	0	refrigeration unit co	
E 🚺 HV							0	energy counter	
	21.4	4 0			22245'20012	CL5-RT	0		
🖃 💡 Lig							0	energy counter	
					22245'10076	DI24-4	0	1/0's	
Mis							0	energy counter	
									Iller and
									Historic of
									alarms
				4					
					Di:	splay com	munication quali	ity	
				_					

This function will allow the alteration of the position of regulators in the "Installation configuration" menu.

Once this function has been activated, it is possible to move the mouse for the selection of a given category or a given regulator. By clicking on either, the module may be positioned according to the following options:

- Above the line clicked on
- Below the line clicked on
- Within the line clicked on

This last option may vary, according to the position of the module:

By clicking on a given category, e.g. Heating, Ventilation & Air-conditioning ["CVC"] or Miscellaneous, the module will simply be positioned in the category concerned.

Figure 12.11.18

If another regulator has been clicked on, the latter will become a directory which will include the module which has been moved. This may prove useful for the grouping of regulators.

# 12.11.12. MONITORING OFF

Monitoring off

Figure 12.11.19

By clicking on "Monitoring off", you will deactivate the monitoring function for the unit concerned – this may be useful where the latter is transmitting known alarms which are in the course of processing. The corresponding line in the "Installation configuration" window will then be displayed in red.



While the monitoring function is out of service, the unit will generate no alarms and information on its operating status will not be available.

Monitoring will be restored by repeating the procedure for monitoring function out of service. You will observe that, by right clicking on the unit on which the monitoring function is out of service, the title of the function will change to "Monitoring off".



By clicking on "Text Display only", Teleswin will confirm the click by displaying a check symbol to the left of "Text display only". This function will allow the viewing of parameters for the unit called up in text form only, with no images, in order to increase the quantity of information visible.

To deactivate this function, repeat the display procedure. Once completed, the check symbol will disappear.

# 12.11.14. CONFIGURATION / REFRESH CONFIGURATION



Where modifications are made to an installation from a PC, these will only be submitted to the central unit upon the interruption of communication with the latter. To apply these changes while still connected, click on "Send configuration from PC -> Site". The PC -> Site function will submit changes to the DI58, which will then be incorporated into the PCs of other users upon their next connection.

# 12.11.16. MAINTENANCE / RESTORE AN OLD CONFIGURATION



The central unit will regularly save the configuration of your installation (Name of terminals, customizations and the order of appearance of the latter). Using this function, it will be possible to retrieve a saved version at a later date.

Select the date of saving to retrieve the desired configuration.

# Figure 12.11.24 Image: Color of Iguration Image: Color of Iguration Select the configuration Image: Colspan="2">Image: Colspan="2" Image: Colspan="

# 12.11.17. MAINTENANCE / REPLACE CONTROLLER

Configurations	•	Test communication	
A Maintenance		Replace controler	Figure 12.11.25
	- 20	Delete	
Export	-	Initializations by starting up 🔸	

To replace a module, the use of this function will be mandatory. Firstly, the module to be replaced must be removed from the bus and replaced by the new module. During the execution of this function, the software will complete the following tasks:

- Copying of parameters from the old module into the new module
- Change of designation of the new module
- Deletion of the old module from the list of units.

For example:

	 	no answer	22245'10076	DI24-4	4	
						_
						Figure 12.11.26

Clicking on "Replace module" will open the following window:





By clicking on "Delete", you will delete the unit selected from the list. If you delete a module which is still connected to the DC58, this module will be automatically restored to the list after a few minutes.

# 12.11.19. MAINTENANCE / INITIALIZATION BY STARTING UP / ADD NEW SLAVE



Clicking on "Add new slave" will open the following window:

Add slave	
Bus number 1	This function will permit the addition of modules which are not included in the NEWEL 3 range, but are recognized by Digitel SA. This function will allow e.g. the addition of energy meters.
Serial number	
Cancel 😫 OK 🙀	Complete the fields
Figure 12.11.30	our requirements.

# 12.11.20. MAINTENANCE / INITIALIZAIONT BY STARING UP / CLEAR ALL CENTRAL UNIT DATA

A Maintenance		rest communication	
	5	Replace controler	Recreate alarm messages
Export •	X	Delete	add new slave
		• • • • • • • • • •	
		Initializations by starting up	Clear all central unit data

Figure 12.11.31

This function will delete all data from the central unit. After restarting, the central unit will execute an automatic search for all units connected to the latter. This operation may take a few minutes.

# 12.11.21. MAINTENANCE / INITALIZATION BY STARTING UP / LUNCH THE NEW SLAVES RECOGNITION

Aaintenance	•		Recreate alarm messages
Export	- ×	6 Delete	add new slave
		Initializations by starting up 🔸	Clear all central unit data
		Updates >	Lunch the new slaves recognition
W L		obuices .	Figure 12.11.32

This function will permit the central unit to complete the more detailed identification of new modules. Upon the connection of a number of new modules, it is possible that certain modules will share the same address. This operation will permit the central unit to identify any such cases, and to allocate new addresses to modules which share a common address.

# 12.11.22. MAINTENANCE / INITALIZATION BY STARTING UP / IMPORT DATA FROM AN OTHER PLANT



This function will permit recovering the data from the central unit DI48 and to import these data to a new DC58.

All modules and their parameter will be preserved. This operation is quite useful if you want to update an old plant and to replace a DI48 with a DC58.

	12.11.23.	« EXPORT »	
Export		• Export -> Excel	
		W Export - >Word	Figure 12.11.33

These functions will permit the copying of data from all units into a Word file or an Excel spreadsheet.

# 12.12.ALARMS

This chapter describes all the information which can be accessed from the various alarm windows.

The alarm window, which will open upon the start-up of TelesWin, will notify you of all unacknowledged or current alarms on each of your installations. This window will be comprised of numerous sort functions, which will permit the rapid location of specific alarms.

Current	alarms					X
10. <sup>4</sup>	atoffees ted the treat	A DRAN	-papit	to be	it the state	•
1	Digitel	Slave 1/1	03.10.2012	13:59	Ambient temperature too low	~
1	Digitel	Fruits et légumes	03.10.2012	09:32	Température ambiante trop basse	E
1	Digitel	Slave 1/1	03.10.2012	09:32	Ambient temperature too low	
1	Digitel	Fruits et légumes	03.10.2012	07:15	Température ambiante trop basse	
1	Digitel	Slave 1/1	03.10.2012	07:15	Ambient temperature too low	
1 🗸	Digitel	Rooftop	18.09.2012	11:43	Circuit 1, Comp. 1, B.P.	
1 🗸	Digitel	Slave 2/0	18.09.2012	11:43	Compressor 1, L.P.	
1 🗸	Digitel	Slave 2/0	18.09.2012	11:43	Compressor 1, L.P.	
1 🗸	Digitel	Rooftop	18.09.2012	11:13	Détection de fumée	
1 🗸	Digitel	Slave 2/0	18.09.2012	11:13	Smoke Detector	
1 🗸	Digitel	Slave 2/0	18.09.2012	11:13	Smoke Detector	-
4		m				>
Installatio	n 🔽	Unit	v			

At the top of the menu, various tabs are available for the reorganization of the display. By clicking on these tabs, it is possible for alarms to be displayed in ascending or descending order.

Figure 12.12.1

At the bottom of the menu, there are two scroll-down menus. The "Installation" menu will allow the display of alarms for a specific installation only. Once an installation has been selected, the "Unit" tab will allow you to select a given unit, in order to display the alarms associated with that unit only.

The two buttons at the bottom right will allow you to turn off the sound of alarms and exit the window.

By right clicking on the list of alarms, you will open a scroll-down menu which will allow the execution of the following processes:



Alarm acknowledgement functions will only become operational once you are connected to the installation. We would strongly advise you to regularly acknowledge alarms processed, in order to restrict the number of alarms to be downloaded upon start-up, thereby accelerating the connection to an installation.

"Details of alarm" will open a window containing more specific information on the alarm concerned, including: the start date/end date, person responsible for acknowledgement, time of acknowledgement, etc.

Figure 12.12.2

The "Historic of alarm" function will open the following window:

Historic of ala	rms				- <b>-</b> X
	a solitoton ont	perio a	to be	25.00 - 55.00	,
Digitel	Slave 1/7	24.09.2012	11:06	Contact C1 alarm	*
Digitel	Slave 1/4	24.09.2012	08:03	Switch off temperature of defrosting not reached	E
Digitel	Slave 1/1	24.09.2012	07:15	Ambient temperature too low	
Digitel	Slave 1/7	24.09.2012	06:01	Switch off temperature of defrosting not reached	
Digitel	Slave 1/1	24.09.2012	05:07	Ambient temperature too low	
Digitel	Slave 1/1	24.09.2012	04:34	Ambient temperature too low	
Digitel	Slave 1/1	24.09.2012	03:23	Ambient temperature too low	
Digitel	Slave 1/1	24.09.2012	01:59	Ambient temperature too low	
Digitel	Slave 1/4	24.09.2012	00:03	Switch off temperature of defrosting not reached	
Digitel	Slave 1/7	24.09.2012	00:01	Switch off temperature of defrosting not reached	
Digitel	Slave 1/7	23.09.2012	19:00	Contact C1 alarm	-
.4	m				>
Installation	_ Unit	•			

This window will have the same properties as the previous window, but will include all the alarms which have occurred since the commissioning of the installation. Only alarms which are no longer current and have been acknowledged will be included in this list.

Figure 12.12.3

# 12.13. FUNCTIONS OF THE CENTRAL UNIT DC58

This chapter describes all the functions which are available on the DC58.

GENERAL

Configuration of the installation							21		
	-	Test_D	igite	el .					
Name of unit	Mesured	Setpoint	Alarm	Outputs	Infos	ID	Туре	•	
💂 Central unit						0	DI58	0 ^	<b>#</b>
E 🗱 Refrigeration								0	ara 🖉
Slave 1/0	0.1	0.0		<b>渋 晩 米</b>		22245 28509	DC24DE	0	
Save 1/1	0.1	0.0		<b>幽錄</b> 朱		22245 29245	DC24D	0	

Double click on the "Central unit" line highlighted.

12.13.1.

Figure 12.13.1

This will open the following window:

Parameters of central unit DI58	
General Time Access Control SMS messaging E-Mail messaging LAN parameters Refrigeration circuits Info         Name of installation         Test_Digitel         Frequency of recordings (Min)         Delay alarms autoacquitement (days)         3         Generate high priority alarm in case of defect of the second compressor or fan         Currency       6         Advanced parameters       Energy management         Cancel       OK	In this window, TelesWin will display a number of basic parameters which may be modified at any time, including: - the name of the installation - the frequency of recording - the automatic alarm acknowledgement time
Figure 12.13.2	

You can also check the function "Generate a high priority alarm in case of defect of the second compressor or fan" to enhance the security of your installation.

# 12.13.2. CLOCK

The "Time" tab can be used for the setting of the system time and the parameterization of the opening schedule for the installation.



By the selection of "By weekly calendar", it will be possible, in the right-hand table, to set the opening and closing times for each day of the week. This schedule will be applied to every week, taking no account of exceptional dates of closure.

A more accurate parameterization, taking account of exceptional dates, may be executed by selecting the "By timer" option.

For greater precision, see figures 3.9.1 – 3.9.3 (pp 41-43).



# 12.13.3. ACCESS CONTROL

In the access control window, you can create rights of access for your colleagues. Simply click on a blank line and enter the name of the user, followed by their password. You will then be able to select different levels of authorization. To remove a user, simply right click on the name concerned, then click to delete.

# 12.13.4. SMS MESSAGING

Parameters of central unit DI58								
General Time Access Control SMS messaging E-Mail messa	aging LAN parameters	Refrigeration circuits Info						
✓     SMS-messaging on       Type of alarm messaging       ✓     All the alarms to the same received	Modem type							
C Addressees and priorities defined in grouped alarms (Advanced parameters)								
Phone number 0123456789								
Test of SMS sending ✓ Daily sending of test messages Phone number	\$	Sending hours  10:00						
0123456789		17.00						
Advanced parameters Energy managem	ent	Cancel	OK					

In this tab, it is possible to programme the automatic submission of alarms by SMS. To do this, check the box "SMS messaging on".

It is possible to send all SMS messages to the same receiver, or to submit each category of alarms, defined in the "Advanced parameters"/ "Combined alarms" tab, to a respective recipient, in due consideration of the priority of alarms (see chapter 12.13.11).

#### Figure 12.13.5

To receive a SMS message upon the clearance of each alarm, check the box "Send message at the end of alarm".

The box "Daily sending of test messages" will provide confirmation to the effect that the system is operating correctly. A number of submission times may be selected, at which you will receive a test message confirming that the SMS messaging system is operating correctly.

This function will require a GSM modem connected to the DC58 central unit. The correct operation of this function, together with the after-sales service, will only be guaranteed where modems are supplied by Digitel. The circuit arrangement for the connection of the modem to the DC58 is included at the end of the present documentation.

# 12.13.5. E-MAIL MESSAGING

Parameters of central unit DI58										
General	Time	Access Control	SMS messaging	E-Mail messaging	LAN parameters	Refr	igeration circuits Info			
▼ E-	✓ E-Mail messaging on ✓ Send a message at the end of alarm									
_ Туре	of alarm	n messaging —					Data of e-mail service provider-			
All the alarms to the same receiver										
C Addressees and priorities defined in grouped alarms (Advanced parameters)										
	Password									
Tests	Tests of e-mails sending									
	Daily se	ending of test mes	sages	Send	ding hours		SMTP server			
Add	lress	example@test.c	om		17:00		Eexample.com			
		,			₹		· · ·			
Expedi	itor (e-m	ail) regulation@t	est.com		ОБј	ect	Alarm cooling unit			
Recipi	ents	example@te	st.com							
		,								
	Advanced parameters         Energy management         Cancel         OK									

E-Mail messaging works similarly to SMS. Additional fields specify the email address from which the alert messages emanate, and the subject of such messages. It is also necessary to specify the messaging data which provider, is selected in the fields provided for this purpose.

Figure 12.13.6

12.13.6. LAN PARAMETERS

Parameters of central unit DI58     Image: Central Control SMS messaging E-Mail messaging LAN parameters       General Time Access Control SMS messaging E-Mail messaging LAN parameters     Refrigeration circuits	In this tab, it is possible to modify the LAN parameters of your central unit.
Local IP Address       192.168.225.254         Subnet mask       255.255.255.0         Gateway IP       192.168.254.255         DNS Server       195.186.1.162	
Advanced parameters Energy management Cancel OK	Figure 12.13.7

# 12.13.7. REFREGIRATION CIRCUITS

Parame	ters of central u	nit D158 http://statimessaging/linessaging/l	Refrigeration circuits Info
Circui Libel	t number <b>O</b> é	<ul> <li>Interact</li> <li>Stop all units during default of all compressors (stop with C1, C2, SD, SE or safeties interrupted)</li> </ul>	In cascade with the positive circuit below  Stop of all compressors when the associated positive plant is in default

This menu contains the list of all the refrigeration circuits of the installation. For each one, the "Interact" operation, described in the "Management of cooling units" (3.10 Management of cooling unit) can be enabled or disabled.

With the option "Stop all units during default of all compressors (stop with C1, C2, SD, SE or safeties interrupted)" checked, when all compressors are stopped by contacts C1, C2, SD, SE or by safety switch-off chains, all cooling units in the same refrigeration circuit will be stopped.

For negative circuits cascaded with a positive circuit (Booster type installations), check the option " In cascade with the positive circuit below". In the combo box below, the corresponding positive circuit can be selected. With the option "Stop of all compressors when the associated positive plant is in default" checked, in case of failure or forced shutdown of all compressors of the positive unit, the negative unit of this cascade will fail and all its compressors will be stopped. This will stop all cooling units of the negative circuit also if that option is checked (see above).

Important! Note that activation of the options described above will result in:

- 1. Stopping all units of the refrigeration circuit when the compressor plat controller detects failure or forced shutdown of all compressors.
- 2. In case of cascade, failure or forced shutdown of all compressors of the positive circuit also stops all compressors and all cooling units in the negative circuit.
- Normal operation will be restored within 20 seconds after the failure has disappeared from at least one of the compressors. It will also be restored 10 minutes after shutdown of the DC58 central unit or after a communication failure on the bus.

# 12.13.8. INFO

This tab may be used to consult information on your central unit.

Parame	ters o	f central unit D	158				1		X
General	Time	Access Control	SMS messaging	E-Mail messaging	LAN parameters	Refrigeration cire	cuits Info		
			F	firmware version	DC58-16431				
			I	D	2224511111				
			I	Гуре	DC58-1				
									VF61 - 1.3
	Adva	nced parameter	s Ener	gy management		Cancel		ОК	



#### 12.13.9. ADVANCED PARAMETERS

No of defrosting :	zone	0			·							Units of zone
Day	1	2	3	4	5	6	7	8	9	10	•	
Wonday	00:00	06:00	12:00	18:00								
Tuesday	00:00	06:00	12:00	18:00								//4
Wednesday	00:00	06:00	12:00	18:00								
Thursday	00:00	06:00	12:00	18:00								
Friday	00:00	06:00	12:00	18:00								
Saturday	00:00	06:00	12:00	18:00								
Sunday	00:00	06:00	12:00	18:00							•	
								In th for ti defro disp	is z he c ost z lave	one orre zon	, re əsp e w	egulators onding rill be

In case of the simplified management of defrost operations, where the same time schedules are repeated on every day of the week, defrost times will be programmed in the cooling unit.

If more elaborate management is required, it is possible to combine units in defrost zones. Units within the same zone will commence their defrost operations at the same time. All units will await the completion of defrosting in the final unit of the zone before resuming refrigeration.

#### Figure 12.13.10

A single installation may comprise

up to 32 defrost zones. These are numbered from 0 to 31. For the parameterization of a zone in the window shown in Figure 13.9.1, select the number of the zone concerned, and then enter the defrosting times for every day of the week in the table. Up to 10 defrost operations per day may be programmed.

Fields corresponding to defrost operations which are not used must be left blank.

The inclusion of a unit in a given defrost zone, and its behaviour in the course of defrosting, will be programmed for the regulator in question in the "Defrost" menu.

Modification of parameters			a X
General T.Ambient Defrost Probe C Probes E,F Settings Calendar	Infos		
		Wait t	he end of other defrostings
Description	Value	<ul> <li>Yes</li> </ul>	
is probe B present?	no	No	
Defrosting type	air with fan		
Fans delay after defrosting (min)	-2.0		
5kip next defrost if valve open time shorter then (Min)	0		
Maximum duration of defrosting (Min)	30		
Seginning of defrosting no. 1 (HH:JWM)	00:00		
Beginning of defrosting no. 2 (HH:JWM)	06:00		
Beginning of defrosting no. 3 (HH:/WM)	12:00		
Beginning of defrosting no. 4 (HH:NM)	18:00		
Beginning of defrosting no. 5 (HH:NM)	00:00		
Beginning of defrosting no. 6 (HH:NM)	00:00		
Fan fonction	disabled during defrosting		
Zoned defrosting controlled by central unit	Yes		
No of defrost zone	0		
Wait the end of other defrostings of this zone			
		Selec	ct the
		00/00	
		matc	hing defrost
Advanced parameters     Personalise     Per Copy parameters from an other unit	ersonalise the alarms		
lave 1/0			

The defrost times programmed in regulators will be ignored in the case of operation by defrost zones. However, in case of a communication fault (bus disconnected, central unit shutdown), units will complete the defrost operations programmed in their defrost parameters (Figure 12.13.11).

# 12.13.10. NETWORK VARIABLES

	Variabel utdoor temperature (°C) door temperature (°C)	Slave Chambre de congélation	Value	•
Ok In Ot	utdoor temperature (°C) door temperature (°C)	Chambre de congélation	▼ Probe C	
In	door temperature (°C)			▼ ▲
0		Chambre froide	Probe C	
	utdoor humidity (%)			
In	door humidity (%)			
C	D2 content (ppm)			
Lu	minosity			
En	nergy counter (kW)	Eclairage	Consomption	
An	alogical network variable no. 2	Chambre de congélation	Probe B	
An	alogical network variable no. 3			
Fo	orced day operation (switch)			
Fo	orced night operation (switch)			
Di	gital network variable no. 1	Chambre de congélation	Contact C2	
Di	gital network variable no. 2			
Di	gital network variable no. 3			
				<b>T</b>

Using this tab, you may select a variable from the list which you wish to communicate to all regulators on the installation. This function, as shown in the example, can be used to communicate the exterior temperature to all regulators – this variable can then be used to modify the operation of the unit concerned.

For example: the parameter "Luminosity" is a network variable. A number of regulators are responsible for the actuation of lighting. These modules, in accordance with the "Luminosity" variable which is notified to all regulators, can adapt their lighting command function.

Figure 12.13.12

# 12.13.11. GROUPED ALARMS



In order to avoid any excess workload for the standby service and optimize the management of alarms, the processing of alarms may be differentiated according to time, the unit concerned and the importance of the alarm. To this end, it is possible to create groups of units and assign specific alarm processing functions to these groups.

The procedure to be applied is as follows:

Figure 12.13.13

The procedure to be applied is as follows:

Create a timer which will specify office opening hours, in accordance with the procedure described in chapter 12.13.12. Periods outside these times will be classified as standby hours.

- 2. Under "Office hours timer" in the "Grouped alarms" tab, select the timer created.
- 3. Create a group of alarms by entering its name in the "Designation" column.
  - a. Select the constituent units of this group by checking the boxes in front of their respective names in the table "Associated units" on the right-hand side of the window.
  - b. In the columns for "Priorities notified during office hours", check the priorities required. In the group concerned, alarms with an unchecked priority will be ignored during office opening hours.
  - c. Also check the priorities required in the columns "Priorities notified during standby hours". Only alarms with a checked priority will be processed during standby hours. Other alarms will be ignored during these periods.
  - d. If alarms in the group concerned are to be transmitted by SMS, enter the number under "Number of SMS recipient". If not, this field should be left blank.
- 4. Repeat stage 3 to create all the alarm groups required.

A maximum of 32 alarm groups may be created. A single unit may be included in one or more groups. Likewise, the unit concerned may not be included in any group.

Alarm priorities will be defined for each unit in accordance with the procedure described in chapter **12.12** "Customization of alarms".

The above description relates to the transmission of alarms by SMS and the signaling of alarms by combined alarm contacts. The reception of alarms by monitoring PCs using TelesWin is described in chapter 12.12 "Alarms".

The group concerned may control a module output which is programmed in "Input-Output" mode. An example of this function is set out below.

Go to unit parameters in "Input-Output" mode, and then click on one of the output contacts.

The RL1 output contact will function as follows:

While no alarm from the group corresponding to "nuit wk" is signalled, the contact will remain open. In case of an alarm, the contact will close.

In general, it is advised that this mode of operation should be reversed by activating the status inversion of the RL1 output using the last parameter in the list.

Modification of parameters	lick once on the line Function of RL output" and elect "Grouped alarms"
Allgemein Settings Output RL1 Output RL2 Output RL3 Infos	Invert the DI 1 output state
Description	Value
Function of output RL1 Name of groupped alarm handling RL1 output Invert the RL1 output state Then select the alarms which is In this case, it w	e group of combined s to control the output. will be "nuit wk"
Advanced parameters <u>P</u> ersonalise Per Copy parameters from an other unit	rsonalise the alarms Save parameters as model Copy parameters from model
Eclairage	Figure 12.13.14

In the same way, it will be possible to parameterize the other 2 outputs on the module to signal alarms on other groups.

All alarm information will be routed via the communication bus. Outputs programmed for the "combined alarm" function will automatically switch over to alarm status where the corresponding regulator receives no information from the bus for a period exceeding 15 minutes. This may occur in case of the shutdown of the central unit or the disconnection of the bus.

12.13.12. TIMER		
Parameters of central unit D158		Our system will permit the
Defrost Network variables Grouped alarms Timers		creation of up to 128 timers,
Timer New timer	Rename timer Delete timer	which may use for the
Static Model Switch on times Valid on weekdavs	Exceptions 🖵 Repeat each year	and closing times, the control of
	Day Model	lighting, heating, etc
		To create a new timer, click on "New timer"
	•	
New model Delete model	New exception Delete exception	
Cancel		Figure 12.13.15
	0	

In the window which will then open, enter the name of your timer.

Parameters	of central unit DI58	
2	Timer name	Click on "OK" to confirm.
	Exemple	
	OK Cancel	Figure 12.13.16

It will then be necessary to create models for daily operation which will be applicable on different days of the week. For example, there may be one operating model for working days, another for Saturdays and a third for public holidays. These models will be associated with the timer which is currently in the course of creation. Each timer will be associated with its own models (up to a maximum of 128). To create a model, click on "New model".

Enter the name of the model (in our example: "Monday - Friday").

Parameters	of central unit DI58	
?	Name of model Monday - Friday	Figure 12.13.17
	OK Cancel	Click on "OK"

In the new model, it will now be necessary to enter the periods of time during which the timer will be active (start and finish times in the table "Operating periods". A maximum of 4 periods may be programmed per model.

Timer	Example ind=1			New t	timer	Rename	e timer	Delete time	r
Model	Switch	on times		Valid on weekdavs		Exceptions	↓ <sup>— Repea</sup>	at each year	
	Beginning	End	<b>P</b>			Day		Model	•
Monday - Friday	07:00	18:00	•	Mo Tu We Th Fr Sa Su					•
			•						
	Beginning	End	•						
Saturday	08:00	12:00	*	Mo Tu We Th Fr Sa Su					
			*						
	Beginning	End	F.						
Holiday			•	Mo Tu We Th Fr Sa Su					
			•		-				-
			_						
	New mod	el		Delete model		New exce	ption	Delete excep	tion

In this example, we will create two further models:

A "Saturday" modelA "Holiday" model

In the "Valid on weekdays" column tick the box to apply the model on days concerned.

On days where the timer is to remain deactivated for the entire day, the fields provided for times should be left blank.

Figure 12.13.18

Once this task is complete, the screen will look like this:

Timer	Example	New timer	Rename	timer Delete timer	
Model	ind=1 Switch on times	Valid on weekdays	Exceptions	↓ Repeat each year	
Monday - Friday	Beginning         End           07:00         18:00	Mo Tu We Th Fr Sa Su	Day	Model P	
Saturday	Beginning End 08:00 12:00	Mo Tu We Th Fr Sa Su			
Holiday	Beginning End	Mo Tu We Th Fr Sa Su			
	New model	Delete model	New except	Delete exception	

We will now consider exceptional cases. These involve days upon which operation will deviate from the rules entered in the weekly schedule (e.g. a public holiday which falls on a Monday).

Timer	Example					•				Nev	v tin	ier			Rei	name	e time	er	Dele	te timer	
	ind=1																	Rene:	at each uea		
Aodel 🛛	Switch	on times			Valid	on	Nee	kda	vs			d.	E	xce	otion	s	Ţ	Tiepeo	a each yea		
	Beginning	End	•								-				Day				Model		۲
Aonday -	07:00	18:00	*	Мо	Tu	We	Th	Fr	Sa	Su							Г			-	•
Tiudy				~		<b>v</b>	•	▼	Г	•		déce	mbre	e 201	7	►					
			•							L	М	М	J	۷	S	D					
	Regioning	End	•						_		28	29	30	1	2	3					
aturday	00-00	12:00	÷	Мо	Tu	We	Th	Fr	Sa	4	5	6	7	8	9	10					
	00.00	12.00	-				Г	Г	7	18	19	20	21	22	23	24					
			-							25	26	27	28	29	30	31					
			-						_				4								
oliday	Beginning	End	•	110	The P		Th	E.	6.			auj	ourd	hui							
londay			•	mo		we			24	SU											
									1	M											
			•								•										•
			_					_													
	New mod	el		De	lete	mod	del							N	ew e	exce	ption		Delete	e exceptio	n

To create a new exception, click on the button "New exception".

Select the day upon which the timer is to operate in an unusual manner.

In this example, we will use Christmas day, Monday the 25<sup>th</sup> of December 2017.

Select the date from the calendar and select the operating model which is to apply on the day concerned.

Figure 12.13.20

rost Network	variables Grouped alarms	Timers				will be class
Timer	Example	▼ New timer	Rename tir	mer D	elete timer	Lioing this n
Model	ind=1 Switch on times	Valid on weekdays	Exceptions	Repeat each	year	possible to
	Beginning End	•	Day	Mo	odel 🕨	exceptional
Monday - Friday	07:00 18:00	Mo Tu We Th Fr Sa Su	25/12/2017 🔽	<ul> <li>Holiday</li> </ul>	<b>-</b>	years.
	Reginging End	•				
Saturday	08:00 12:00	Mo Tu We Th Fr Sa Su				
Holiday	Beginning End	Mo Tu We Th Fr Sa Su				
	Neu model		New event i		<b>•</b>	
	New model				ete exception	
		Cancel	<			Figure 12.13.2

Accordingly, Christmas Monday will be classified as a holiday.

Using this method, it will be possible to programme every exceptional day for the next 20 years.

Click on "OK" to save the programmed timer settings.

Finally, to activate the timer, exit the window by clicking on "OK".

Parameters of central unit DI58     Image: Central unit DI58       General Time     Access Control     SMS messaging     E-Mail messaging     LAN parameters     Refrigeration circuits     Info	To use your created timer go to the "Time" tab and in the "Opening hours handling" select the "By timer" option.
10:31       Dpening hours handling       Timer openning hours         21/11/2016 <ul> <li>Permanent closing</li> <li>By weekly calendar</li> <li>By timer (yearly calendar)</li> </ul> <ul> <li>Image: Set</li> <li>By timer (yearly calendar)</li> </ul> <ul> <li>Image: Set</li> <li>By timer (yearly calendar)</li> </ul> <ul> <li>Image: Set</li> <li>Image: Set<!--</td--><td>After that you can choose you timer in the "timer opening hours" selection.</td></li></ul>	After that you can choose you timer in the "timer opening hours" selection.
Advanced parameters Energy management Cancel OK	Figure 12.13.22

# 12.13.13. ENERGY MANAGEMENT

Energy use may be managed by clicking on the button "Energy management". This will open the following window.

Parameters of energy management	The energy management function is activated by selecting "on".
Energy control	Select the meter provided for energy management from the scroll-down menu "Energy meter", then select the power variable to be considered (you may choose between "Active power [kW]" and "Apparent power [kVA]".
Cancel OK	Figure 12.13.23

The "Tariffs" tab will open the following window:

	Allowed power limit (KW)	500	Periods of validity		
lign rate	Drive and Khulle	10	Begining (DD.MM)	End (DD.MM)	•
	Flice per Kwri	ļiu	01.02	01.12	~
	Timer - schedule of price rate Exa	imple	•		
	Activation of the price rate by a con	tact (network variable)			
	✓ Yes Network variable Dig	ital network variable no. 1	<b>▼</b>		-
Aiddle rate	Allowed power limit (KW)	750	Periods of validity		
	Price per KWh	7	Begining (DD.MM)	End (DD.MM)	<u> </u>
	Timer, ashedula of price rate	mple	01.01	31.12	
	Timer - schedule of price rate	ample	<u> </u>		
	Activation of the price rate by a con	tact (network variable)			
					-
	New pr	Delete pi	nce rate		

This tab may be used to define the maximum limit on consumption, in kW.

The "new price rate" button allows to create a time slot associated with a timer and to specify the price of kWh during this time, as well as the desired consumption limit. In the example, we have defined separate consumption limit for High rate and middle rate hour. For each tariff created, select the corresponding timer from the drop-down menu and specify the price and the desired consumption limit in the field provided. The "Periods of validity" allows to specify the periods of the year in which the tariff applies.

Figure 12.13.24

Finally, tick the box "Activation of the price rate by a contact (network variable)" triggers this tariff when the selected network variable is activated, even outside the time slot define above.

Slave 1/0 Slave 1/1	Slave 1/	D	
	Switch off allowed during power reduction	Г	
	Operation allowed during high rate periods	Г	
	Operation allowed during middle rate periods	Г	
	Switch off priority		
	Minimal operation time before switch off (minutes)	0	
	Maximal switch off time (minutes)	0	
	Power of unit (KW)	0.0	

In case of excessive consumption, the system will shed certain units in order to reduce consumption. The selection of consuming devices which are to be shutdown will be based upon the parameters associated with these devices which are entered in this window, for each unit considered separately. Priority and authorization for load shedding, the capacity of the unit concerned and other criteria will allow the system to apply an intelligent selection for the reduction of consumption without disturbing the operation of the installation.

Figure 12.13.25

The third tab, "Units", will open the following window:

Regulators in operating mode 3 "Inputs-Outputs" can control up to 3 energy consuming devices.

Parameters of energy management	estatos 'acresses' tos esses (acaracte	ri teliogo		<u> </u>	Accordingly, criteria for each consuming device must be
					selected separately.
Units Claus 1/0	Output RL3	<i>С.</i>			
Slave 1/1	Output RL2	83			
	Output RL1	$\neg$	Ļ	Ļ	
	Switch off allowed during power reduction	Г	Г	Г	
	Operation allowed during high rate periods	Г	Г	Г	
	Operation allowed during middle rate periods	Г	Г	Г	
	Switch off priority	-			
	Minimal operation time before switch off (minutes)	0	0	0	
	Maximal switch off time (minutes)	0	0	0	
	Power of unit (KW)	0.0	0.0	0.0	
	Cancel				Figure 12.13.26
					J

# 12.14.USE OF TIMERS AND NETWORK VARIABLES

The outputs of DI24 modules programmed in mode 3, "Inputs-Outputs", may be controlled by timers and/or by network variables. For the configuration of these outputs, call up the corresponding unit and open the parameterization window. Click on the table "RL1 output". The first parameter will allow the selection of the function which is to be assigned to the corresponding contact. By selecting "open" or "closed", the corresponding contact will be maintained in the open or closed position respectively.

Modification of parameters	Carde State	Wal de	e x
Aligemein Settings Output RL1 Output RL2 Output RL3 Measu	rements Infos	Function o	of output RL1
Description	Value	open	
Function of output RL1	timer	closed	
Timer handling RL1 output	Example	timer	
orce outputs state	auto	controlled by r	network variable
nvert the RL1 output state	no	timer "AND" ne	etwork variable
		timer "OR" net	twork variable
		controlled by p	prope
		timer "OR" pro	be
		grouped alarm	1
		Brechester	
		_	-
			-
		×	
		-	
Advanced parameters	Personalise the alarms		
Copy parameters from an other unit			
ave 1/1			
c (/ )			

Where "timer" is selected, the list of parameters will appear as follows:

The following parameter will allow the selection of the timer which is to control the RL1 output. The RL1 output contact will close during those periods where the selected timer is activated, and will open outside the active periods of that timer.